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# TECHNICAL

# NOTES

## LAKE STATES FOREST EXPERIMENT STATION U.S. DEPARTMENT OF AGRICULTURE · · FOREST SERVICE

No. 540



### 1957 Forest Tree Seed Crop about Average in the Lake States

During 1957 overall forest tree seed crops in the Lake States were about average for the 12-year period since 1946, according to observations made at field centers of the Lake States Forest Experiment Station. Outstanding were the bumper or near-bumper crops of red pine and white pine cones throughout the region (see table on reverse side). This contrasts with 1956 when these two species were the poorest of all reported. Seed crops of other tree species generally varied by localities from poor to good.

In northern Minnesota bumper crops were reported in some localities for red pine, white pine, basswood, yellow birch, and paper birch. Seed crop failures occurred among the following species: White spruce, black spruce, northern white-cedar, and tamarack.

In northeastern Wisconsin red pine had the only bumper crop, but good seed crops were produced by white pine, paper birch, quaking aspen, and bigtooth aspen. Crop failures were reported for the spruces and sugar maple. Other species had poor to fair crops.

The only species with a bumper seed crop in central Upper Michigan was white pine. Good crops, however, were borne by red pine, yellow birch, and red oak. The seed crop failed in jack pine, white spruce, balsam fir, northern white-cedar, tamarack, beech, basswood, and black ash. Poor to fair crops were produced by the other species. This is in contrast to the generally good seed production in this area in 1956.

Generally the best crops were produced in Lower Michigan. Red pine, white pine, and white oak had bumper seed crops, and white spruce had a good crop. Beech was the only species with a seed crop failure. Other species produced poor to fair crops.

In north central North Dakota good seed crops were reported for American elm, green ash, chokecherry, American plum, and Russian-olive. The only crop failure was in ponderosa pine. Poor to fair crops were produced by all other species reported.

Most seed collectors are interested chiefly in the pines, so 1957 will be considered a good seed year in the Lake States. Red pine produced the best crop regionally since these reports began in 1946, and the white pine crop equalled that of the best previous year (1946). Wildlife species depending largely on mast for winter food had good to fair prospects where oaks occur, but poor ones where beech is the main food.

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PAUL O. RUDOLF, Forester

Table 1.--Forest tree seed crops in the Lake States, 1957

Species	Estimated percentage of a full crop <sup>1/</sup> in--				
	Northern Minnesota	Northeastern Wisconsin	Central Upper Michigan	Lower Peninsula Michigan	North central North Dakota
Red pine	75-95	95	75	<u>2/</u> 95	<u>3/</u> -
Eastern white pine	95	75	95	<u>2/</u> 95	-
Jack pine	25-75	25	7	-	-
Scotch pine	-	25	-	-	-
Ponderosa pine	-	-	-	-	7
White spruce	7-75	7	7	75	-
Black spruce	7-50	7	25	-	-
Norway spruce	-	7	-	-	-
Balsam fir	25-50	25	7	-	-
Eastern hemlock	-	-	25	-	-
Northern white-cedar	7-75	50	7	-	-
Tamarack	7-25	50	7	-	-
Sugar maple	75	7	25	<u>4/</u> 50	-
Red maple	-	-	25	-	-
Boxelder	-	-	-	-	25
American beech	-	-	7	7	-
Basswood	95	25	7	-	-
Yellow birch	95	50	75	-	-
Paper birch	50-95	75	25	-	-
Quaking aspen	25	75	50	-	-
Bigtooth aspen	-	75	50	-	-
American elm	50	-	25	<u>4/</u> 50	75
Siberian elm	-	-	-	-	50
Hackberry	-	-	-	-	25
White ash	-	25	-	-	-
Green ash	-	-	-	-	75
Black ash	25	25	7	-	-
Bur oak	-	-	-	-	50
Northern pin oak	-	-	-	50	-
Black oak	-	-	-	25	-
Northern red oak	-	<u>5/</u> 50	75	25	-
White oak	-	-	-	95	-
Chokecherry	-	-	-	-	75
American plum	-	-	-	-	75
Russian-olive	-	-	-	-	75
Caragana	-	-	-	-	50

<sup>1/</sup> Percentages of a full crop are classified as 0-15, failure; 16-35, poor; 36-60, fair; 61-90, good; and 91-100, bumper.

<sup>2/</sup> Indicates north half of Lower Peninsula.

<sup>3/</sup> - signifies no report on this species.

<sup>4/</sup> Indicates south half of Lower Peninsula.

<sup>5/</sup> Southern Wisconsin.